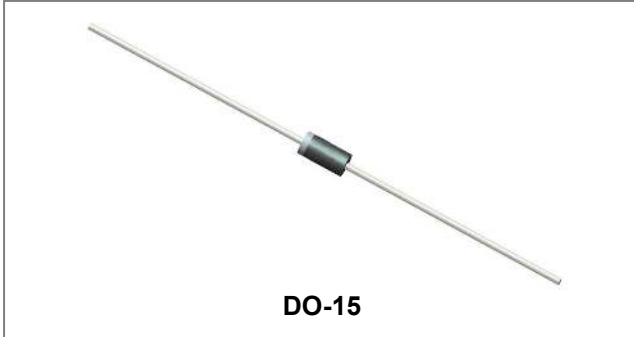


# FR151 THRU FR157

## FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.5 Amperes



### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC DO-15 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.014 ounce, 0.40 grams

### Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

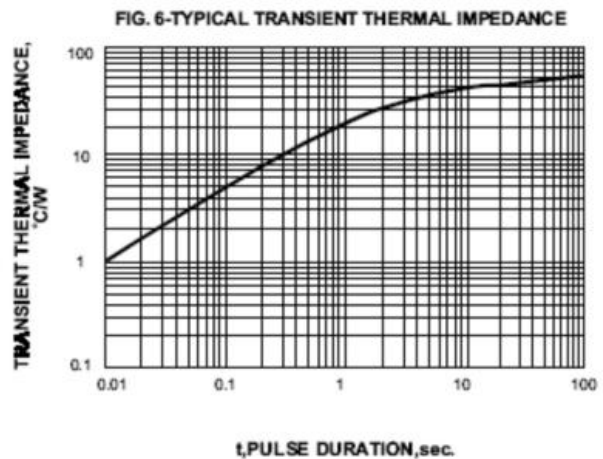
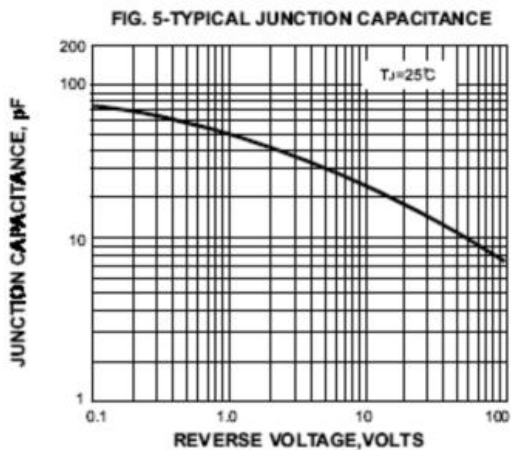
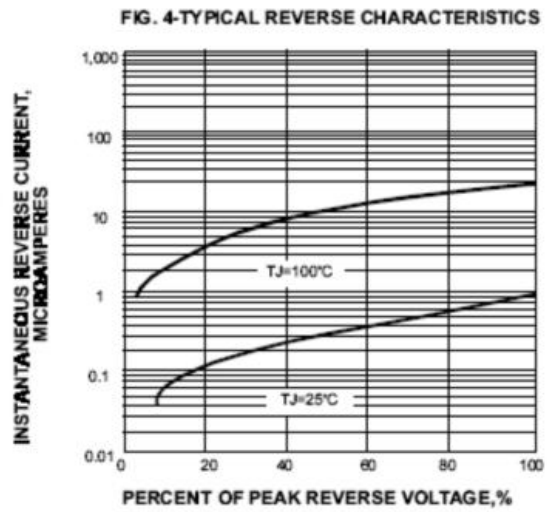
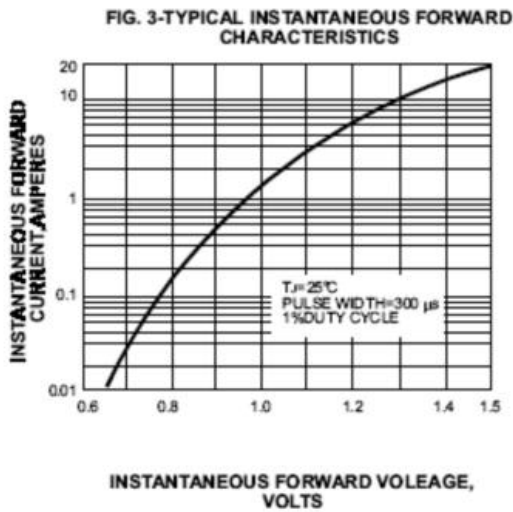
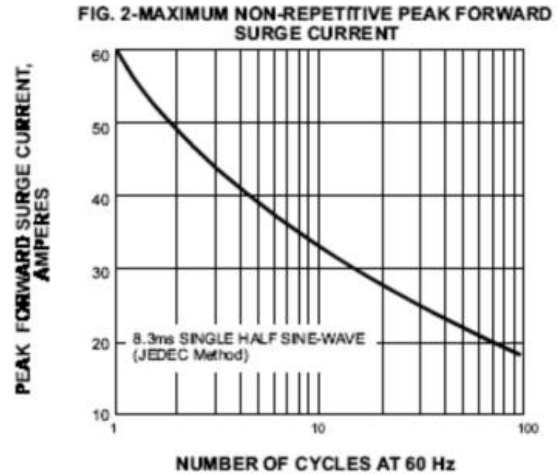
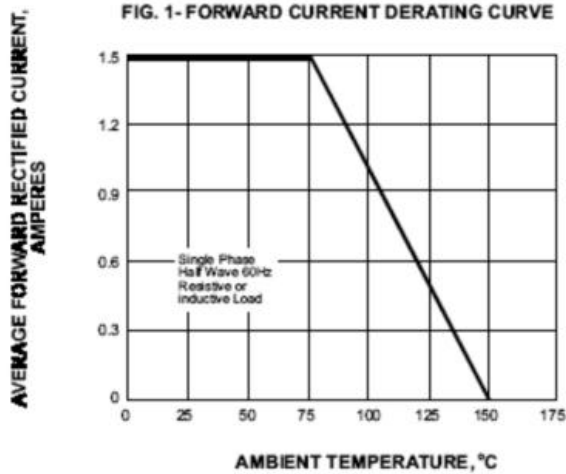
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	FR151	FR152	FR153	FR154	FR155	FR156	FR157	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.5							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60							A
Maximum instantaneous forward voltage at 1.5A	$V_F$	1.3							V
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=100^{\circ}\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	150				250	500		ns
Typical Junction Capacitance (Note 2)	$C_J$	30.0							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50.0							$^{\circ}\text{C/W}$
Junction Temperature	$T_J$	-65 to +150							$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150							$^{\circ}\text{C}$

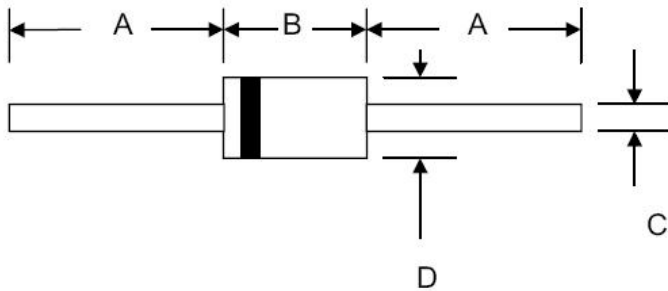
Note: 1. Reverse recovery condition  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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**Ratings and Characteristics Curves**



**Mechanical Dimensions DO-15**



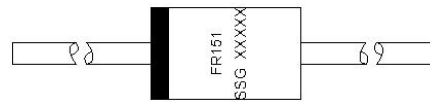
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	5.5	7.62	0.217	0.300
C	0.7	0.9	0.028	0.034
D	2.6	3.6	0.104	0.140

**Ordering Information**

Device	Package	Shipping
FR151-FR157	DO-15 (Pb-Free)	3000pcs /tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

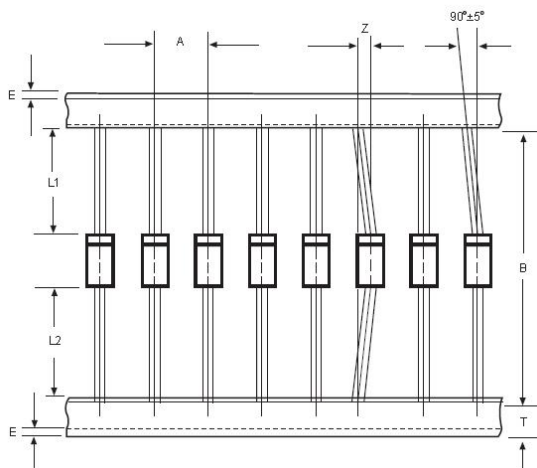


Where XXXXX is YYWWL

FR151 = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

**Carrier Tape Specification DO-15**



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0



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